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# STEM ROT, CUTTING ROT, AND LEAF SPOT OF DIEFFENBACHIA MACULATA 'PERFECTION' CAUSED BY FUSARIUM SOLANI

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Dieffenbachias are commonly grown as foliage plants in Florida and have an annual value of 6 million dollars (1). Over the past 3 years, diseased Dieffenbachia maculata (Lodd.) G. Don 'Perfection' were collected from several commercial nurseries in Florida. Symptoms included stem and cutting rots, leaf spots, and seed rot. Fusarium solani (Sacc.) Mart, emend. Snyd. & Hans. was consistently isolated from infected tissues (1).

SYMPTOMS. Stem rot often starts at the top of a stem where a cutting was removed from the stock plant. A dry rot about 2-5 mm deep appears initially on the cut end. Stem centers eventually appear sunken and soft, and this condition can often result in the loss of affected stems from the mother plant (1). Occasionally, lesions begin at the soil line of uncut stems and are most frequently associated with emergence points of aerial roots. These lesions are purplish red and up to 3 cm long (1). The stems often collapse after the pathogen progresses into their centers (Fig. 1A).

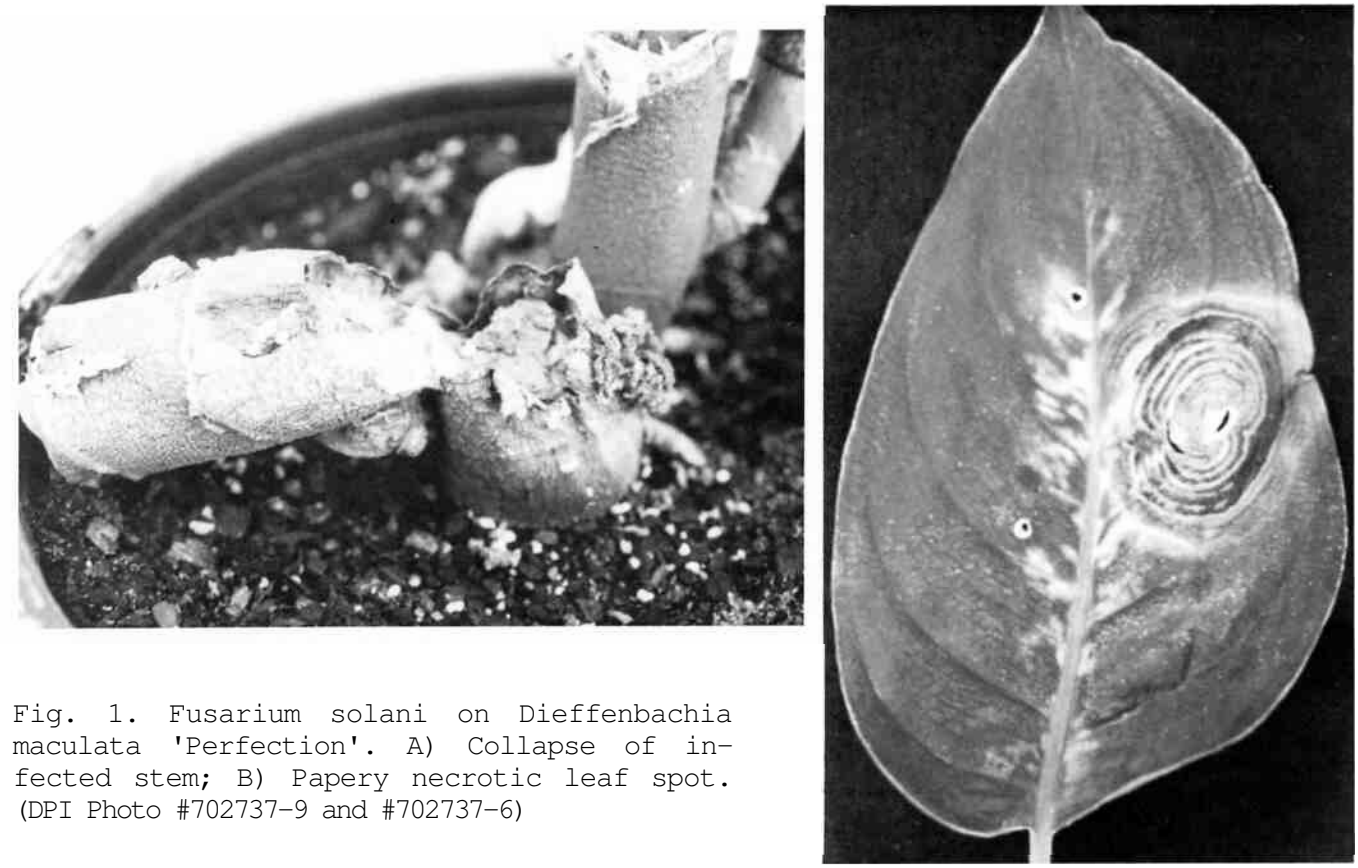

Fig. 1. Fusarium solani on Dieffenbachia maculata 'Perfection'. A) Collapse of infected stem; B) Papery necrotic leaf spot. (DPI Photo #702737-9 and #702737-6)

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In some cases, the cut end of the tip cutting is affected and appears brown and mushy. Leaf spots are sometimes found on cuttings that are rooted under conditions of high moisture. Spots enlarge rapidly to form papery, necrotic areas up to 3 cm in diameter (Fig. 1B). Infection also occurs along petioles where fungal conidia lodge, and these petiole lesions have the same purplish red coloration of stem infections (1).

CONTROL. Avoidance of the disease through use and maintenance of pathogen-free stock is the best control. Once established, the disease is difficult to eradicate. The cut stock plants should be immediately sprayed with benomyl and the cuttings should be dipped in benomyl prior to sticking or drenched with benomyl immediately after sticking to prevent infection.

SURVEY AND DETECTION: Look for dryish leaf spots with concentric rings or for the presence of round, orange to red fruiting structures of the fungus at the bases of the rotted stems. Symptoms caused by F. solani are very similar to those found in bacterial blight and cane rot caused by Erwinia chrysanthemi and E. carotovora, but this fungal disease lacks the distinctive rotten odor of the bacterial disease and produces a reddish purple border on the stem lesion which is not seen in the bacterial disease. Because both have been detected on the same infected plant on several occasions, diagnosis should include culture of the tissue to accurately choose the optimum control.

LITERATURE CITED:

1. Chase, A. R. and N. E. El-Gholl. 1982. Stem rot, cutting rot, and leaf spot of Dieffenbachia maculata 'Perfection[1] incited by Fusarium solani. Plant Disease 66:595–598.

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